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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,532	07/11/2003	I-Min Chin	251704-1020	5046

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EXAMINER	
CHAUDHRY, SAEED T	

ART UNIT	PAPER NUMBER
1746	

DATE MAILED: 10/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/618,532	CHIN ET AL.	
	Examiner	Art Unit	
	Saeed T. Chaudhry	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restriction

Applicant's election without traverse of Group I, claims 1-6 in Paper No. August 9, 2005 is acknowledged.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. § 119, which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song in view of Hasumi et al.

Song (6,192,547) disclose an automatic air blown cleaning apparatus for cleaning a liquid crystal display substrates. The device comprising an air supplier for supplying air (4); an air distributor, supported within and across the air flow space downstream from the inlet passage,

the air distributor distributing the air to be sprayed uniformly toward the substrate through a slit (nozzle); a conveying system for conveying substrate 101 under the slit for removing solution and debris from the substrate. The air flow is blown in the conveyed direction of the conveying device. (see claims, Fig. 4 and col. 3, line 44 through col. 5, line 25). The reference fails to disclose an air filtering blower.

Hasumi et al (5,351,354) disclose a dust cleaner. The reference discloses that in conventional dust cleaner for removing dust adhering to the surface of an object, a compressible fluid sent from a blower 2 is blown out from a Blower louver 4 through a high efficiency particulate air filter 3, as shown in FIGS. 3 and 4. An apparatus is known wherein an object 0 passes on rollers 6 and dust adhering to the surface of the object is blown off by this compressible fluid. In production plants of ICs, a method is known which blows off the dust at each fabrication step using high pressure air blown from an air blower. The dust is blown off by an exhaust duct and prevented from once again adhering to the integrated circuit (see col. 1, lines 11-30 and Figs. 3-4). The reference fails to disclose a LCD component.

It would have been obvious at the time applicant invented the claimed apparatus to include an air filtering blower as disclosed by Hasumi et al into the apparatus of Song et al for the purpose of filtering the air to remove dust particles from the air and to increase the air speed. Further, it is conventional to use a filter and air blower to remove dust particles from a substrate surface. Therefore, one of ordinary skill in the art would use Hasumi et al apparatus, since Hasumi et al apparatus is capable of removing dust or solution remaining on the substrate such as liquid crystal display (LCD) component or semiconductor or any flat substrate and it is known to remove solution with air from the surface of the LCD components as disclosed by Song. The liquid crystal display component is a liquid backlight membrane would have been obvious to

clean with air-blown apparatus of Hasumi et al because Song discloses to clean the LCD with air and one would expect that the liquid display panel or a backlight membrane would be able to clean with air-blown apparatus.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Song in view of Hasumi et al as applied to claim 1 above, and further in view of Reinwald et al and Young.

Song and Hasumi et al were discussed supra. However, the reference fails to disclose a colander and the air flow is blown along a circulation path formed by the inlet, the filter, the colander, the blowing device and the outlet.

Reinwald et al (4,164,430) disclose a filter basket 23 consists of a colander type perforated double cone, which imparts the necessary mechanical strength to the filter element applied against the inside, and consisting, for example, of textile material, a fiber mat or a fine wire mesh (see col. 11, lines 37-42).

Young (5,265,298) discloses a air blowing system for removing dust particles from a surface wherein a fine dust filter placed at the blower inlet to remove dust which would otherwise enter the blower (see col. 4, lines 37-49).

It would have been obvious at the time applicant invented the claimed apparatus to include a colander at a side of a filter as disclosed by Reinwald et al into the apparatus of Hasumi et al and Song for the purpose to enhance the filter strength, since it is conventional to use a colander, which provide the necessary mechanical strength to the filter element applied against the inside. Further, it would have been obvious to provide the filter in the inlet of the blower as

disclosed by Young into the apparatus of Hasumi et al and Song for the purpose to remove dust particles before entering into the blower, which would contaminate the blower.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saeed T. Chaudhry whose telephone number is (571) 272-1298. The examiner can normally be reached on Monday-Friday from 9:30 A.M. to 4:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Michael Barr, can be reached on (571)-272-1414. The fax phone number for non-final is (703)-872-9306.

When filing a FAX in Gp 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communication with the PTO that are for entry into the file of the application. This will expedite processing of your papers.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Saeed T. Chaudhry
Patent Examiner

MICHAEL BARR
SUPERVISORY PATENT EXAMINER